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Division of Research
School of Business / Indiana University

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Gasoline price increases throughout the nation are likely to continue; therefore, alternative means of transportation are once again of general interest. Of the many interurban lines which once connected Indiana's cities and towns only the South Shore remains. George Smerk provides an update on the prospects for this commuter system which runs from South Bend into downtown Chicago.

The output of the state is difficult to measure. Louis West presents a new set of estimates of Indiana's Gross State Product. Because of data limitations, 1977 is the most recent year for which a full set of estimates is possible. We will continue our efforts to improve the information available.

VIEWPOINT offers thoughts on the forests of the state and advocates ways to maintain this industry in Indiana. Robert Menke's statement is adapted from remarks he made to Senator Richard Lugar at a symposium on Forestry, sponsored by Indiana Forestry and Woodland Owners Association, on August 8, 1979.

—MJM

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South Shore Renaissance

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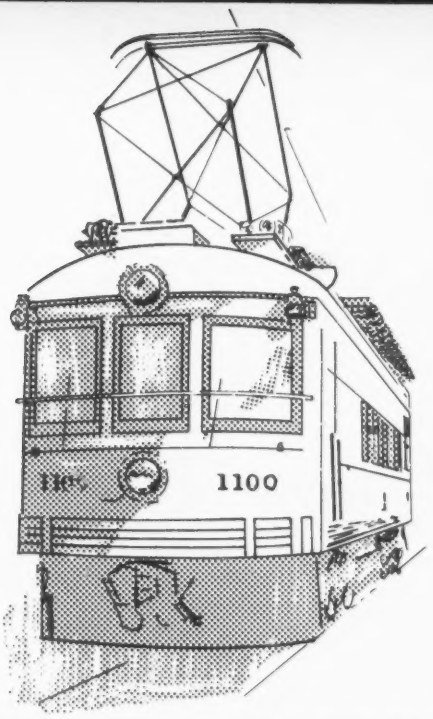


The Chicago, South Shore, and South Bend Railroad has always held a unique position on the American railroad scene. It is perhaps best known as the last electric interurban–it has survived forty years longer than almost all of the others. The South Shore has managed this by providing commuter rail service between South Bend and Chicago and by developing a substantial freight business. This longevity and capability is due largely to Samuel Insull's rebuilding and upgrading of the railroad in the 1920s. Insull saw the South Shore's right-of-way not only as a pathway for his electric utility's power distribution system, the original reason for his purchase of the property, but also as a means of providing quality transportation between northern Indiana and Chicago. Today's superbly maintained right-of-way is still a monument to Insull's foresight.

The South Shore is also famous for its modernized passenger cars. Some of the standard 1920s-vintage heavy steel interurban cars purchased during the Insull era were cut in half and lengthened during the 1940s. Air conditioning and fluorescent lighting were added to make the cars as modern as newly minted equipment of the same period. Today, in addition to the famed traction orange, pantograph-equipped passenger cars, the South Shore is symbolized by heavy unit trains of coal moving into power-generating plants and steel mills along its route.

Although the South Shore is a strange combination of nostalgic interurban operations–the trains still run down the middle of the street in Michigan City–and modern railway unit trains, it is typical of other railroads in that it is plagued with all the problems of commuter passenger service and with the burden of heavy and increasing passenger losses.

For more than a decade, the South Shore has been controlled by the Chessie System, which owns 94% of its outstanding shares of stock. The Chessie acquired the South Shore in 1966 to gain access to certain mills and generating plants that were natural markets for coal from mines elsewhere on the Chessie System. The South Shore freight service is quite profitable at present.

Passenger service is another story, however; Chessie views it as a millstone. Passenger losses through the '50s and '60s had been kept fairly well under control, and the railroad's freight business, even before Chessie's acquisition, was sufficient to carry the passenger losses and still

George Smerk is the Governor's trustee to the Northern Indiana Commuter Transportation District. An article he wrote with Hagi Gil and David Shlay, "The South Shore Railroad: Preserving and Improving Commuter Service in Indiana," appeared in the July-August 1978 *IBR*.

leave a tidy profit. As inflation rose during the late '60s and in the '70s, the passenger losses ballooned. In addition, the obvious need for new passenger equipment to replace the cars built in 1926 and 1928 made it clear that substantial inputs of capital were needed to keep the South Shore passenger service running. The rising failure rate of the old cars, particularly in bad winter weather, and the creeping ravages of rust and corrosion on car body components was evidence that the cars of the 1920s would not last forever.

The railroad cut back on service to save operating expense and to have more time for passenger car maintenance. The most dramatic cutback came in 1972 when extensive pruning left only two round trips a day between Chicago and South Bend as part of the railroad's thirty-nine daily trips. Most passenger trains run only between Michigan City and Chicago, with additional service between Gary and Chicago. Ridership fell from about 14,000 trips per day before 1972 to about 6,500-7,500 trips per day in recent years.

In the early 1970s, the South Shore tried to get a grant for new commuter cars from the Urban Mass Transportation Administration. This effort was abortive because no local body existed to act as the necessary conduit for federal funds, even though the railroad would have provided the required local share. At that time, Hoosier conservatism and distrust of federal programs were an overriding problem facing the South Shore. As the mid-1970s approached, it appeared to be only a matter of time before passenger service on the South Shore would be discontinued.

The story that follows had its beginnings in 1974 and recounts how the South Shore has entered into a period of renaissance that promises to transform it and its passenger service.

The Corridor Study

In 1974, the Indiana General Assembly appointed a Mass Transportation Study Commission to review the state's mass transportation situation. The Commission reported a need for improvement in mass transportation and recommended that the state take action and provide aid to mass transportation. Although Indiana had taken relatively little advantage of federal aid programs up to that time, there was rising pressure around the state to provide means so that local communities would have enough matching funds to acquire federal grants for transit.

In the latter part of 1974, the Federal Government made available to the State of Indiana planning money on a statewide basis; a large part of this was to be used in an inventory of public transportation in Indiana. This money was provided to the Governor who asked this author to conduct the inventory and make some policy recommendations. In early 1975, the Institute for Urban Transportation (IUT) conducted the statewide inventory of mass transportation operations, which included the South Shore Line. IUT recommended a state program of aid to mass transportation in the form of money and technical assistance.

Meanwhile, the Indiana General Assembly, heeding the report of the Mass Transportation Study Commission, created in 1975 a state matching grant program (state funds to help local areas provide the required match for federal transit grants), appropriating $2.5 million in funds. The General Assembly also created the Public Transportation Advisory Committee to advise the Governor on mass transit matters and to apportion the state matching funds to be made available. Although by state law the matching grant program was to be handled by a division of public transportation within the State Planning Services Agency, such an agency was not funded at that time. The Governor's office chose to have IUT administer the state matching grant program as a part of the Indiana Mass Transportation Improvement Project (IMTIP); thus, an unusual situation resulted where a part of a state university was administering a state grant program.

In late fall 1975 the state matching monies were initially apportioned using a formula developed by IUT and approved by the Public Transportation Advisory Committee (PTAC). Of the matching funds from the state, approximately $100,000 was for the South Shore. (The state money was made available on a formula based on the population of counties which had public transportation. The South Shore—which operates through Lake, Porter, LaPorte, and St. Joseph counties in Indiana—received aid on the basis of its service in Lake County. The Northwestern Indiana Regional Planning Commission (NIRPC), the planning agency for Lake and Porter counties, devised a formula for apportioning the money locally.) Perry Maull, Administrative Director of IUT, questioned the use of the money for the South Shore if the threats that had been heard for several years about the railroad going out of the passenger business were serious. If the passenger business was eliminated, the state money might be spent more wisely somewhere else. In December 1975, Mr. Maull visited the South Shore. He reported that this railroad's apparently vital role in the area should be carefully studied and documented. In April 1976, the Public Transportation Advisory Committee approved a recommendation to conduct a study of the South Shore corridor to see if, indeed, it was worthy of preservation and improvement. Mr. Maull began the process of acquiring the necessary planning money from the Urban Mass Transportation Administration (UMTA).

Getting the money together for the study occupied the summer and fall of 1976. In October, the South Shore petitioned the Interstate Commerce Commission for discontinuation of passenger service. It appeared that the corridor study was more important than ever if Indiana was to retain South Shore commuter rail service to Chicago. The IUT team, led by Hagi Gil and David Shlay, had already started data collection when the ICC held its hearings early in 1977. The hearings were lengthy and conducted at many places along the South Shore Line. On the basis of the evidence presented, the decision of the ICC administrative law judge was that the railroad must continue to operate until February 8, 1978, in order to give the state and local governments a chance to take public action to preserve the service.

The Northern Indiana Commuter Transportation District

The strong interest of IUT in its corridor study was modest compared to that of the Northwestern Indiana Regional Planning Commission (NIRPC). Because the South Shore ran through NIRPC territory and affected the lives of the people in the area, NIRPC was extremely sensitive and very knowledgeable about the importance of the railroad and the continuation of its passenger service. James Ranfranz, Deputy Director of NIRPC, established a steering committee to help channel public input and support for saving and improving South Shore passenger service. Other support groups, such as Save Our South Shore, which had sprung up when the railroad made its petition, continued to be active. NIRPC, through the work of Mr. Ranfranz, brought together many interested groups to conduct a vigorous campaign for some help from the state. NIRPC, as well as IUT, had reviewed the hearings, and it was clear there was tremendous public support for the continuation of South Shore service. Moreover, NIRPC saw the great importance of a reinvigorated South Shore in helping to develop the full potential of the northwest Indiana region.

Thanks to those efforts, the 1977 General Assembly provided major help in preserving and improving the South Shore. It passed legislation that permitted the formation of commuter transportation districts as public bodies empowered to help commuter railroads. As a result of this, the Northern Indiana Commuter Transportation District was formed, effective June 27, 1977. The General Assembly also put its money where its mouth was by making a special

appropriation of $3.6 million as a match to federal funds for South Shore capital improvements. In addition, the General Assembly continued the regular state matching fund program for mass transportation, some of which could also be used for the South Shore in matching federal grants. (The matching funds were available to match federal capital and operating money. The federal share is 80% for a capital grant and 50% for an operating grant. The Indiana state matching grant program provides up to 50% of the local share; the actual amount to each transit property depends on the formula allocation adopted by the PTAC and the sum appropriated by the General Assembly for the program.)

The next step was a major intergovernmental relations effort. The first move was to form the Northern Indiana Commuter Transportation District (NICTD). By law, each of the counties was to have its commissioners name a trustee and the Governor was to name a trustee to represent the state. From the first meeting in late June 1977, it was clear that the two main issues for the NICTD were capital improvements–primarily the purchase of new cars–for the South Shore and the provision of operating support.

At meetings and through correspondence, the trustees and the railroad discussed its plight. The trustees held an inspection tour of the railroad in September 1977. It was obvious that the railroad right-of-way was still in superb condition, particularly between Michigan City and Chicago. It was also clear that the cars were in dire need of replacement. Shop facilities needed revamping and the power supply needed improvement. The condition of the stations and the parking lots along the railroad left much to be desired.

A preliminary report on the IUT corridor study was presented to the NICTD Trustees by Hagi Gil and Dave Shlay in August of 1977. The study was based on very conservative estimates of costs, revenues, and patronage. A number of alternatives were investigated, ranging from keeping the railroad operating between South Bend and Chicago to complete abandonment and replacement of the service by automobiles or buses. The analysis showed that the railroad should be retained. Its main advantage was lower total cost to the NICTD region and the communities within it. Not to be overlooked were the environmental aspects–the last thing the steel mill area of Lake County needs is more gasoline fumes–and the potential of the railroad to move people to the national Lake Shore Park at the Indiana Dunes area of Lake Michigan. The IUT corridor study showed the South Shore to be the most economical and energy efficient of the options, and the safest and least polluting of the alternatives, as well as the option producing the least congestion. The study left no doubt that the South Shore should be retained and improved.

Some severe problems faced the NICTD in the fall of 1977. The February 8, 1978, deadline set by the Interstate Commerce Commission was not far away. Putting together the means of raising the necessary money for making capital improvements was to be a formidable challenge. In addition, there was going to be a need for operating aid. Operating aid, continuing year after year, would be the major problem for the NICTD, particularly since the Indiana counties viewed such matters suspiciously. The public supported the continuation of the South Shore passenger service, but there was a strong feeling that the Chessie should continue to pay for the support of passenger service out of freight profits.

Keeping the South Shore running physically apparently was going to be a problem, too. The South Shore operates through the snow belt of Indiana and bad weather plagues the railroad regularly. The winters of 1977-78 and 1978-79 were particularly difficult ones. Much equipment was disabled by bad weather; a major problem was fine, dry snow getting into the traction motors and shorting them out. The operating deficits were going up substantially and there was continued pressure from Chessie

headquarters in Cleveland to get rid of the passenger-service deficit. At the same time, the railroad realized that efforts were being made by public agencies and the State of Indiana and that, despite the complexities of the problem and the time involved, a solution was likely. The railroad withdrew its petition for discontinuation from the ICC, but announced that it might reenter the petition at some future time.

By the end of 1977, it was clear to all involved that the South Shore was necessary and that it was important to the development of the corridor area of the State of Indiana. It was obvious to the trustees that, while UMTA would be very helpful in providing federal funds, there was a need to involve as little local funding as possible from the four Indiana counties. The trustees also realized the need to study such site-specific matters as the location of stations and parking lot improvements, in addition to the major improvements.

NICTD decided to apply for federal mass transportation money to help buy new cars, and to improve the power supply and the maintenance facilities to support the new rolling stock. Site-specific improvements in station and parking facilities would be carried out under the NICTD aegis, but the strictly local portion of the matching funds would come from either directly affected municipalities or the county involved, not from the District area as a whole.

The trustees also thought it wise not to promise too much to the public. They made it clear that their objective was to keep the service running and to replace the older cars with new ones. They also made it clear that they hoped to improve the quality of the service in the short run before the new cars arrived. But no pie in the sky was discussed.

The NICTD staff worked vigorously in 1978. NICTD carried out negotiations with the railroad and signed a contract for service to cover some of South Shore's operating losses for 1976 through 1978. The staff wrote grant proposals to the Urban Mass Transportation Administration, which eventually granted initial approval of the engineering portion of the proposals. UMTA approved $700,000 in engineering money in the fall of 1978, and NICTD hired technical consultants: Larramore Douglas & Popham was the principal consultant; Louis T. Klauder & Associates was the special consultant on car design and specifications.

NICTD also secured a grant from the Economic Development Administration (EDA) to do some additional planning in the corridor, particularly to better understand the proper location for stations, the needs for parking lots, and so on. Population patterns and travel needs had changed since the railroad had been originally laid out, so the location of stations and support facilities had to be geared to meet the needs of the latter part of the twentieth century.

In discussions with the consultants, the trustees have made it clear that they are thinking of a very basic type of commuter car, probably similar to the stainless steel silverliners built by the Budd company and now operating in the Philadelphia area. Robust and simple control systems are desirable. Stainless steel cuts down maintenance costs (although the trustees feel that some part of the cars should be traction orange in color!). Between thirty and forty new cars, probably a mixture of motor and trailer cars, are likely to be ordered.

The engineering work also includes the railroad's electrical distribution system. The present electrification suffers from severe voltage drops. These drops do not bother the old cars, which can run on current as low as 800 volts DC, instead of the 1,500 volts DC for which they and the railroad were designed; newer equipment requires more constant voltage. In addition to the construction of additional substations to feed the overhead, there is also a need for expansion of the Michigan City maintenance facility to hold the new eighty-five foot cars. Track at the shops will be rearranged for storage of larger cars and for more efficient servicing and maintenance.

As a part of the EDA grant, George Beetle & Associates was hired to study the South Shore, paying particular attention to operating costs as well as to station location. The consultant's preliminary report in the spring of 1979 painted a bleak future for the railroad if the situation remained unchanged. An overall operating deficit for both freight and passenger service was possible by the late 1980s, so there would be no freight profits to help cover the passenger losses. Moreover, the passenger losses would grow substantially because of inflation and even modest attempts to improve the quality of the service. Worse yet, ridership had fallen substantially because of the unreliable service during the winter months of 1977-78 and 1978-79. (Ridership bounced back in the summer of 1979 so that patronage was above 1978 levels for the first nine months of the year, despite the service interruptions in the winter months.) Estimates made on the basis of projections of costs, revenues, patronage, and productivity showed that if these trends remained unchanged, continuing the South Shore operations would be very expensive indeed. Operating subsidies would grow significantly and the resources of the NICTD would be badly strained.

One possibility, of course, was for the NICTD to attempt to get sufficient federal money together to buy the South Shore from the Chessie System; public ownership of failing mass transportation systems is very common in the United States. The problem with that option was the NICTD would end up owning a passenger and freight railroad and there was concern over UMTA's reaction to such a purchase. Buying just the passenger portion of the railroad from Chessie would probably be a complicated and time-consuming business. New ownership alone would be no particular incentive for anybody to do a better job than had been done in the past, and there would still be simple reliance on subsidy to pick up the difference between revenues and costs.

George Beetle suggested a solution: an employee stock-ownership plan (ESOP) and a consumer stock-ownership plan (CSOP). Under an ESOP, the tax laws of the United States and congressional policy are brought into action to help spread the ownership of American corporations. To develop an ESOP corporation, a trust is created to acquire the shares of a company from the owner. The trust borrows money from financial institutions to pay the owner—the Chessie in the case of the South Shore—for the shares. Revenues from the company go to pay off the loan. The ESOP provides capital credit for the employees, all of whom become shareholders in the ESOP company without putting up any money whatsoever. Because the employees have a stake in the company, and will share in dividends from its operation, they have strong incentives to improve productivity.

A CSOP—consumer stock ownership program—should raise the interest of users and potential users in the passenger service. Through this device, another trust would be created and ownership of stock in the company would be vested in regular commuters on the railroad. They would then have every interest in using the railroad themselves and in getting others to use the service, thus improving the marketing potential. The ESOP would own 40% of the South Shore shares and the CSOP would own 40%. The remaining 20% of the shares could stay in the hands of the Chessie and other investors and they could continue to enjoy the benefits of improved earnings.

The use of the ESOP and CSOP has many advantages. Employees have a stake in the operations of the company, and their productive actions will be rewarded. The consumers in the area know that their own use of the service will help remove the railroad from a deficit position and yield them dividends. The Chessie will get its money right up front without the need for the years of litigation that is common in public takeover arrangements. The Chessie,

through its retention of the remaining 14% of the shares, might also enjoy substantial profits over the years because of the improved productivity and market attractiveness of the ESOP-CSOP South Shore.

For their part, the NICTD and the public enjoy the advantages of a more productive service without the need for substantial public monies. Moreover, as a private corporation, the new South Shore will continue to pay property taxes and income taxes. Thus, by the turn of the century, the state and federal governments may realize more back in taxes than was paid in the capital and operating subsidies to help revivify the railroad.

The ESOP/CSOP scheme has been discussed with the management of the South Shore and with representatives of the unions involved, and both parties have shown some interest. No final action has been taken.

Problems and Possibilities

The problems of the South Shore are not over. Potentially, one of the biggest and most unexpected of these problems is Randolph Street Station. The trustees hope to buy eighty-five foot cars to replace the present South Shore cars. Unfortunately, the engineering consultants have discovered eighty-five foot cars won't fit into the South Shore portion of Randolph Street Station in Chicago. Additional engineering money is needed to plan and design the renovated facilities; additional capital is likely to be required.

Over the next ten to twenty years, improvements on the South Shore are likely to total about $50 million in public money. This sum will include all local, site-specific improvements in addition to the purchase of new cars and improvements to the power distribution system and renovation of the maintenance facility.

The problem of covering operating costs has been somewhat ameliorated, thanks to the 1979 Indiana General Assembly. The NICTD staff found that for years the state had been taxing leased rail cars and that the revenues had ended up in the general fund of the Indiana treasury. Aided by substantial political support for the measure from the corridor counties, the General Assembly made that flow of tax money available to commuter transportation districts, at the discretion of the Governor. This will amount to $1.2-1.4 million a year for the NICTD, the only commuter district in Indiana. These tax monies, in combination with the regular state matching fund program, should cover a large portion of the operating losses of the South Shore, perhaps without the need to use local tax money.

The trustees see substantial possibilities for the South Shore. They see a quality passenger service that would, in time, be largely self-sustaining and growing in use and usefulness. The most visible thing, of course, will be the new cars and the new stations along the line.

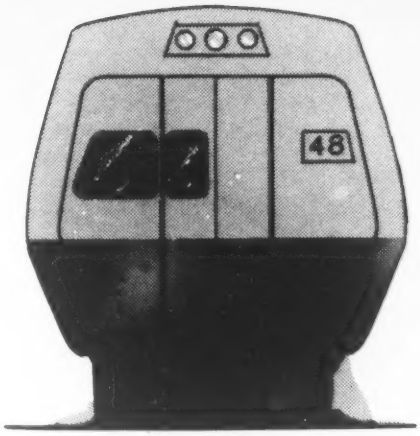
The service offered in the future will probably include a base service hourly between South Bend and Chicago and half-hourly between Gary and Chicago. In South Bend, Michigan City, Gary, East Chicago, and Hammond, feeder bus service would link the South Shore station with the rest of the community. In the not-too-distant future, countywide bus services in Lake, Porter, LaPorte, and St. Joseph counties may also provide feeder links with the South Shore.

The Michiana Regional Airport appears likely to be the South Shore's termination point in South Bend. Michiana will become a multimodal terminal for local and intercity buses as well as for airlines. The difficulty of reaching O'Hare Field in Chicago from northern Indiana could be mitigated for many residents by simply taking the South Shore to South Bend where several airlines provide service to many points.

The operation of special South Shore service to the national Lake Shore Park at the Indiana Dunes is another exciting possibility. The National Park Service hopes to keep

parking at the national Lake Shore Park to an absolute minimum; therefore, visitors would be encouraged to ride all the way by train or to drive to South Shore stations east and west of the park and then ride the train into the park. A number of the old Insull-era cars might be retained and operated during the summer in this special service.

The South Shore is not out of the woods yet, by any means, but clearly a cooperative effort among different levels of government and determined work by a lot of people can assure continuation of the South Shore service. The electric railroad *does have* a place in the present and in the future.



Indiana's Gross State Product

LOUIS J. WEST

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Gross national product (GNP) serves as a measure of the nation's economic health by indicating the level of economic activity taking place. GNP represents the value of all goods and services produced in the United States within a year. Gross state product (GSP), equivalent in concept to GNP, is a measure of the economic activity of a state. To state and local planners, both in business and government, GSP is superior to GNP because of its capacity to express the particular characteristics of a regional economy that set that regional economy apart from the economy of the nation as a whole. Such information can be used to help forecast revenues, budget expenditures, and assess future demands in order to project needed construction programs for production and storage facilities. An absence of value-added data at the state level, however, requires that certain relationships between state and national output and payroll data be assumed. This, unfortunately, dilutes GSP's abilities to reflect the nuances of a local economy.

The basic formula used to generate a figure for gross state product is the value-added estimation technique of J. W. Hendricks and C. L. Jaycox. For each of the ten sectors listed on the accompanying table the sum of national income (NI), capital consumption allowances (CCA), and indirect business taxes (IBT) is weighted with the ratio of state to national income received (IR). Totals for all sectors are then summed to obtain total GSP. However, since NI plus CCA plus IBT equals gross

INDIANA GROSS STATE PRODUCT BY INDUSTRIAL SECTORS: 1977*

Farm	*Mining*	*Contract Construction*	*Durable Manufacturing*	*Non Durable Manufacturing*	*Trade*	*Finance, Insurance, Real Estate*	*Transportation, Communication, Utilities*	*Services*	*Government*	*Other*	*Total*
Millions of current dollars											
1,747.90	544.10	2,038.00	13,647.70	4,020.10	7,276.90	5,154.70	3,724.90	4,178.00	4,052.30	69.40	46,454.40
Percent of U.S. GNP											
3.55	1.13	2.44	4.98	2.21	2.25	1.92	2.21	1.78	1.71	1.18	2.45
Percent change (1976-77)											
9.58	12.15	18.04	16.73	11.01	9.54	12.58	11.40	13.70	9.97	15.19	12.09
Millions of constant (1972) dollars											
1,220.30	224.20	1,381.70	9,585.50	2,944.60	5,135.50	3,961.70	2,763.80	2,837.10	2,826.20	46.30	32,927.40
Rate of real growth (percent)											
9.51	2.11	10.84	8.80	8.19	4.75	6.03	5.25	5.47	2.27	1.37	5.84

*This table presents 1977 results. A six-page printout of the full twenty-year period (1959-1977) is available without charge from the Division of Research.

national product (GNP), the following equation is used:

$$GSP_{t,i} = GNP_{t,i} \times IR\ (state)_{t,i}/IR\ (U.S.)_{t,i}$$

where "t" is the year and "i" is the industry sector. This procedure assumes that production functions in the state and nation are similar for corresponding sectors. A weighting technique to reduce this problem for manufacturing is available but there are currently no methods available to reduce the potential errors in the remaining eight industrial sectors.

The equation used to determine gross state farm product (farm output data are available at the state level) is identical to that implemented by Hendricks–Jaycox and Henry Fishkind* with one minor variation: "value of home consumption" and "gross rental value of farm dwellings" were combined into "nonmoney income" using the definition in the farm income concepts section in "State Farm Income Estimates."

Farm output = cash receipts from marketings
+ Nonmoney income
– Net rent to nonoperator landlords
+ Net change in inventories
– (Feed + Livestock + Fertilizer + Seed) expenses
– Repairs and operation of equipment
– Miscellaneous operating expenses

Gross state government product was defined using the Commerce Department's concept and the Fishkind formula:

$$\text{Government output} = GNP_{ln} \times WSD_{ls}/WSD_{ln} + GNP_{fn} \times WSD_{fs}/WSD_{fn}$$

where WSD = wage and salary disbursements, l = state and local government, n = national, s = state, and f = federal government, both civilian and military.

*Fishkind, Henry H., "Indiana's Gross Domestic State Product, 1954-72," *Indiana Business Review* vol. 49, July-August 1974, pages 1-5.

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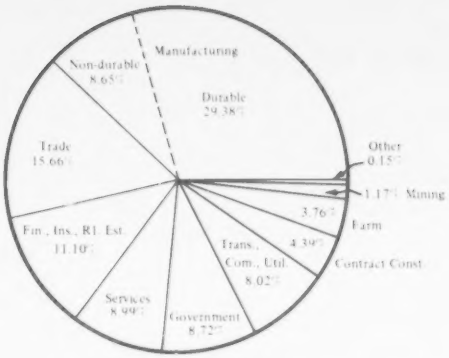

Indiana Gross State Product 1977
Percent distribution by industrial sectors

Use of these formulas for the period 1958-1977 created Indiana GSP figures that agreed within 2-3% of the data generated by Henry Fishkind for the period 1958-1973. The accompanying table presents results for 1977 only.

Deflation to 1972 dollars was accomplished by recomputing GSP with real GNP by sector instead of with nominal GNP by sector.

The calculations described above are based on annual data that are not available until nine months after the close of the year. More current quarterly estimates would be extremely useful, and methods of estimating quarterly GSP are being pursued.

VIEWPOINT

Quality Timber for Indiana's Future

ROBERT H. MENKE

President, Styline Corporation, Huntingburg, Indiana

Indiana's extensive hardwood forests provided capital and raw material for early Hoosier entrepreneurs who created our first wood products industries. In the heyday of wood manufacturing, before the advent of steel and automobiles, before the depletion of virgin timber from our forests and before the depression of 1929, Indiana's furniture industry shipped more tonnage of solid oak furniture than any state in the Union. The renewed growth of wood furniture and kitchen cabinet manufacturing in Indiana, dating from the late '50s, is based largely on new woodworking and finishing technologies and on particleboard, hardboard, plastics, softwoods and low-grade hardwoods imported from other states.

In 1972 our Indiana wood products industry was valued at two billion dollars. Today, with extrapolated growth rates, plus inflation, it is safe to assume that we have a three-billion dollar industry employing more than 45,000 people. It is a scattered industry with many small plants which go largely unnoticed, except in areas like Dubois County where most jobs are related to woodworking. Indiana is the third largest furniture manufacturing state in the United States and growth of capital investment in the last few decades is running close to 500% measured in actual dollars. Economists predict that in the near future consumers will be spending a larger share of disposable income on home furnishings and less on family automobiles.

A survey of wood users made by the Indiana Forestry and Woodland Owners Association this year shows that most Indiana furniture factories do not depend on lumber which comes from Indiana's 3.8 million acres of commercial forests. The 1977 Wood Users Directory, published by the Indiana Department of Commerce, is misleading in that it reports percentages of material acquired in Indiana through wholesalers and agents. Only their figures on fence manufacturing (30% of material acquired in Indiana), handles (50%) and pallets (85%) represent true figures on what actually comes from Indiana forests. Nevertheless, Indiana timber resources are important to

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our wood products industry and we must do all we can to encourage the growth of quality timber. Indiana has fourteen veneer mills and 200 full-time saw mills. Ten thousand oak logs were exported to western Europe from Indiana in the spring of 1979. Sawtimber volume, as surveyed in 1967, amounted to over ten billion board feet. As freight rates increase and as world timber shortages become more acute, our Indiana forest resource will naturally become more and more important.

There are two principal problems associated with tree farming in Indiana. First is the clearing of wooded land for pasture, row crops, power lines, etc. and the development of wooded land for home sites in areas where it should not be developed. The second problem is that of arousing interest in good forestry practices on the part of owners of small woodlots. Eighty-nine percent of Indiana woodlands are privately owned. The average farmer thinks he is too busy to take care of a small acreage of trees because the economic return over a long period of time—perhaps sixty to eighty years—does not justify the investment in timber stand improvement. It is true that an average income of $30.00 per acre per year from hilly, well-stocked tree land permits an investment of no more than $300.00 per acre. It also must be classified to exempt it from property taxes. But real estate agents have boosted the price of scrub land, which grows little more than briars, sumac and poverty grass, to over $500.00 per acre. Tree farming in Indiana is a good long-term investment if one discounts the value of land.

A new day is coming for forestry in Indiana and the signs of its arrival are evident in what we see around us and in the news we read every day on energy and environmental problems. We can accelerate multipurpose forestry planning through educational programs which let people know the ecological values of wooded land for flood control, wildlife, and the maintenance of natural balances in nature. For instance, by maintaining a variety of bird populations, we can reduce the use of chemicals for control of insect populations. We can let people know about the diversity and strength of our wood products industry and its dependence upon a renewable resource. We can suggest to woodland owners that white pine planted on narrow dry ridges and tulip poplar on steep moist hillsides will provide a fair return in forty or fifty years if timber prices continue to go up. We can tell our legislators that tax laws should be changed to discourage people from moving out of towns into costly rural settings. We can tell our congressmen that reserving 10,000 acres of Hoosier National Forest south of Monroe Reservoir as wilderness, banning timber harvests and rationing the use of the land with all the expense that entails, does not serve the best interests of the people of Indiana. We can suggest a positive "back country" wilderness alternative which would: (1) close abandoned county roads, (2) prohibit horseback riding and unauthorized motor traffic, (3) make openings to encourage wildlife propagation, (4) harvest timber away from trails and (5) police areas to control littering and off-road vehicles.

The Indiana Forestry and Woodland Owners Association is working with local forestry groups to encourage better timber management. We are trying to dovetail our programs with those of the Indiana Department of Natural Resources Forestry Division, The Hoosier National Forest and the Department of Forestry at Purdue University. We have enlisted wood products industry support for our organization and we are cooperating with the Indiana Lumbermen's Association. We have also extended privileges of reciprocal membership to Nature Conservancy and the Indiana Conservation Council. We are studying what role we might play in community forestry in order to get the right trees growing in the right places in small towns throughout Indiana. Shade trees and small woodlot parks bordering small communities could provide energy savings as well as recreational amenities.

We need to plant more trees and grow better trees if we wish to make Indiana a better place in which to live. The Governor of Indiana should convene a conference to address the matter of tax incentives to encourage better tree farming and to provide markets for low-grade timber. Faster tax write-offs should be authorized by Congress for investments in particleboard plants or any equipment used in processing wood residues. Only a small part of Indiana's 3.8-million acres of woodlots and forestland—perhaps one quarter million acres—is producing quality timber at or near its potential. Our woodlands can provide the capital and renewable material for the future expansion of our wood industry, as they did in the beginning of our history, if we all work together to accomplish these reasonable goals.